

Idaho State Department of Agriculture  
**Payette and Gem Counties  
Pesticide Detections  
and Idaho's Pesticide Management Plan**

ISDA Fact Sheet 2 - 2009

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The Idaho State Department of Agriculture (ISDA) has been sampling wells in the Payette and Gem Counties regional project since 1998. The location of the project area is shown in Figure 1. The study area is located within the Payette Valley on the western Snake River Plain.

The upper surfaces of the area are composed of eroded sediments from the foothills and uplands, consisting of granite, basalt, and sedimentary rocks (Wicherski, 2000). The alluvial fill within the valley consists of materials from two depositional sources including younger clay, silts, sand, and gravel; and older lacustrine deposits (Wicherski, 2000). The ground water flow direction is to the north, where it discharges into the Payette River (Baldwin & Wicherski, 1994) with some flow to the west towards the Snake River.

There are two sources of ground water in the project area, a shallow water table aquifer and a deeper Payette Valley blue clay aquifer. The main source of recharge to the shallow aquifer is from infiltration of irrigation water and leakage from the Payette River and tributaries (Wicherski, 2000).

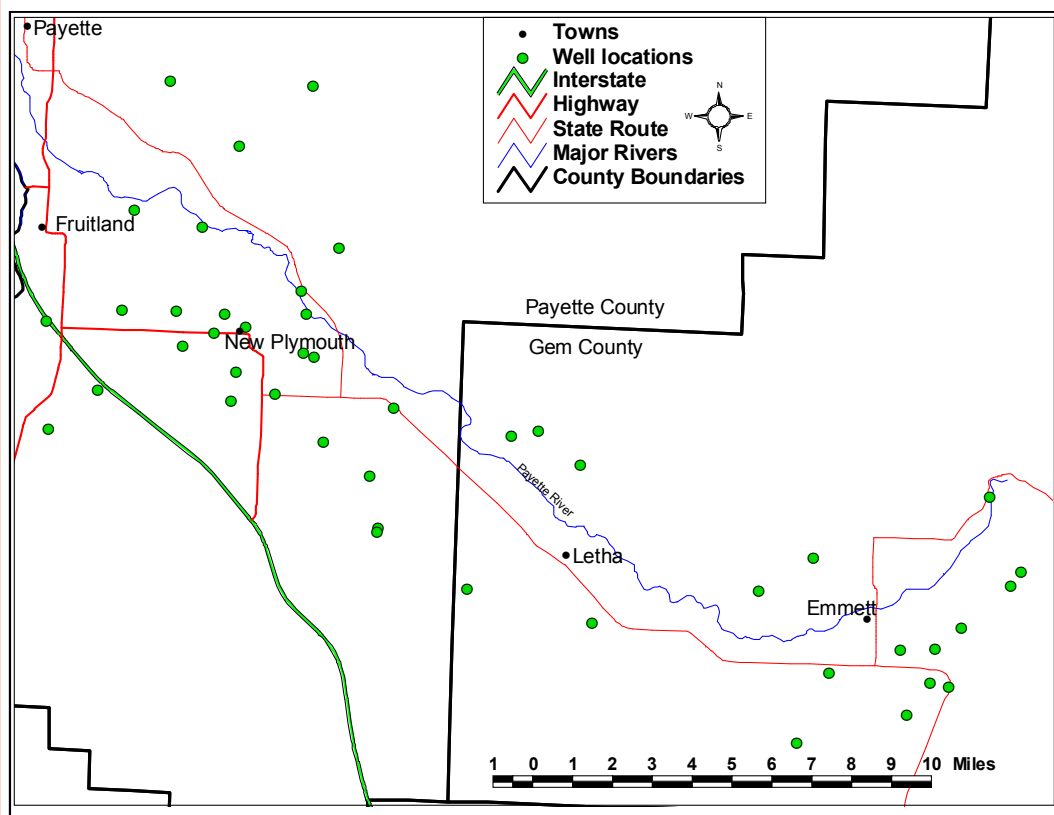


Figure 2. Location of wells within the project area.

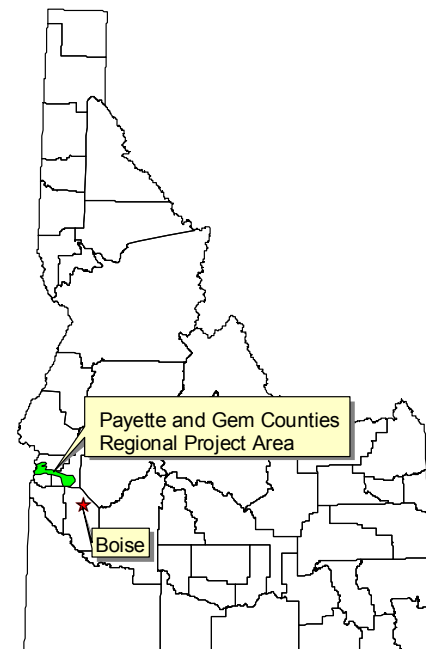


Figure 1. Location of project.

ISDA well sampling locations are displayed in Figure 2. As many as 57 wells have been sampled annually since 1996. Nitrate, sulfate, and chloride have been tested annually. Extensive pesticide tests have been conducted every three or four years with followup

testing done for wells with detections greater than 20% of the reference point or a drinking water standard. The wells in green were sampled in 2009 for nitrate only. All laboratory testing was conducted at the University of Idaho Analytical Sciences Laboratory in Moscow, Idaho. Pesticide screens for the project included four methods and 85 pesticides tested. No wells in the regional project were sampled for pesticides in 2009.

Before using any pesticide,



**READ, AND FOLLOW THE LABEL!**



## Payette and Gem Counties Pesticide Detections and Idaho's Pesticide Management Plan

### 2006 ISDA Pesticide Detections

In 2006, one well in the Payette and Gem Counties Regional Project was sampled for pesticides. Figure 3 displays location of the pesticide detection from the 2006 sampling. The pesticide detected was dacthal (DCPA) at 0.33 ppb, which is a Level 1 detection. All pesticide detections were below any health standards as set by the EPA or the state of Idaho.

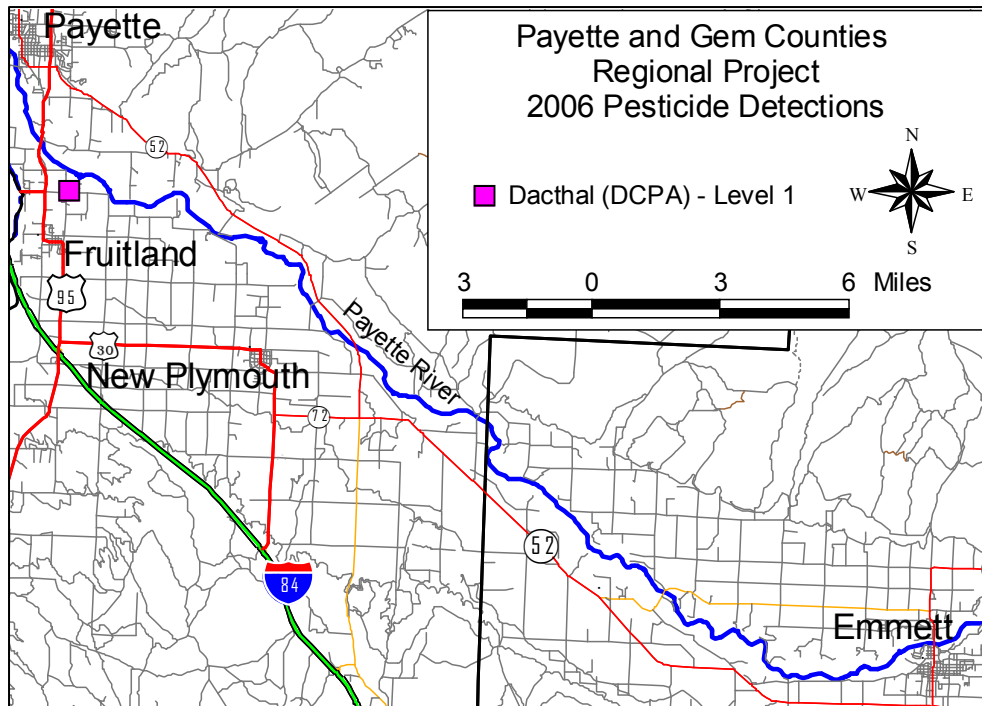


Figure 3. Location of 2006 pesticide detections.

#### Idaho Pesticide Management Plan (PMP)

The Idaho State Department of Agriculture (ISDA) is the lead agency in developing the *Idaho Pesticide Management Plan (PMP) for Ground Water Protection*. ISDA has the authority to implement pesticide programs through a cooperative working agreement with the Environmental Protection Agency (EPA), Idaho state laws and department rules. The Idaho PMP outlines processes to protect ground water from pesticides and defines pesticide detections based on the concentration of the detection compared to a Reference Point. The Reference Point refers to health based concentrations. Idaho has adopted the Environmental Protection Agency's Maximum Contaminant Levels (MCLs) in the Idaho Ground Water Quality Rule (1997). Where no MCL exists, the ISDA will use EPA Health Advisories Levels (HAL) first if they exist, and then an EPA Reference Dose (RfD) number.

#### The PMP categorizes detection levels into the following levels:

- Level 1:** Detection above the detection limit to less than 20% of Reference Point.
- Level 2:** Detection at 20% to less than 50% of Reference Point.
- Level 3:** Detection at 50% to less than 100% of Reference Point.
- Level 4:** Detection greater than 100% of Reference Point.

**It is important for applicators to follow the pesticide label and for ISDA to continue to work with applicators to protect ground water. Review all Label Language including: Precautionary Statements, Environmental Hazards, Directions for Use, General Instructions, Mixing and Loading Instructions, Application Instructions, Precautions, Proper Storage and Disposal.**

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Baldwin, J., and B. Wicherski, 1994. Ground water and soils reconnaissance of the Lower Payette area, Payette County, Idaho. Idaho Department of Environmental Quality Technical Report No. 5.  
  
Wicherski, B., 2000. Ground water quality investigation and wellhead protection study city of Fruitland, Idaho. Idaho Department of Environmental Quality Technical Report No. 17.